

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028551**Date Inspected:** 02-Oct-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Steve Jensen and William Sherwood			CWI Present:	Yes	No
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No N/A
				Delayed / Cancelled:	Yes	No N/A
Bridge No:	34-0006			Component:	SAS OBG	

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 12E-PP116.5-E5 deck access hole inside, QA randomly observed ABF/JV qualified welder Mike Jimenez continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded butt joint. The welder was using Miller Proheat 35 Induction Heating System with the heater blanket put on top of the plate to preheat the repair area and its vicinity to 325°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Mike Jimenez was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm and 4.0mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. Welder Mike Jimenez was noted welding at location Y=760mm to Y=1610mm. During welding, ABF QC John Hays was noted monitoring the welder's welding parameter with measured working current of 130 amperes on the 3.2mm diameter E7018H4R electrodes. During the shift, repair welding at the location mentioned above was completed and the welder has performed the post weld heat treatment (PWHT) of 450°F on the completed repair using the Miller Proheat 35 Induction Heating System and held it for one hour as required. After the completion of the just mentioned repair, the welder has moved to another location on the same deck access hole and started excavating using carbon arc gouging.

Y-location Length Width Depth RWR# Remarks

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1. 760mm 850mm 42mm 12mm 201208-115 R2-completed.

At OBG 12E-E2.1-@31000mm corner drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Wai Kit Lai continuing to perform CJP groove welding first time repair on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder preheated the repair area and its vicinity to >150°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC William Sherwood performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test.

The welder was noted using propylene gas torch to preheat the repair area and its vicinity to >150°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Wai Kit Lai was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1000 Repair Rev. 2. During welding, ABF QC William Sherwood was noted monitoring the welder's welding parameter with measured working current of 128 amperes on the 3.2mm diameter E7018H4R electrodes. During the shift, repair welding at the location listed below were noted;

Y-location	Length	Width	Depth	Remarks
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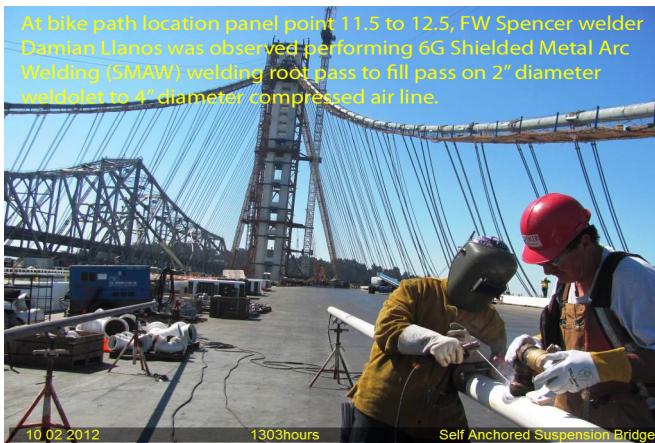
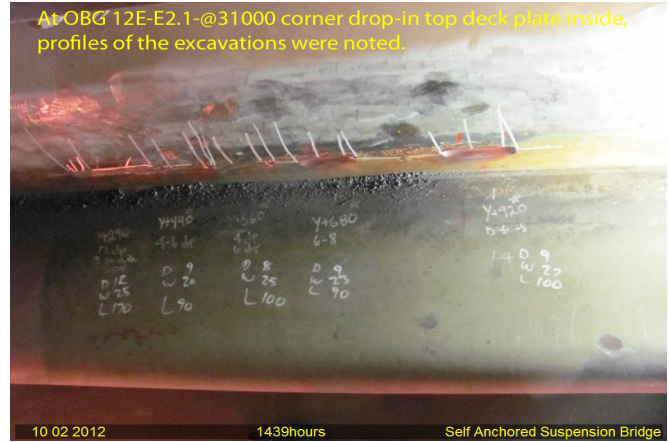
- | | | | | |
|-----------|-------|------|-----|-------------------|
| 1. 3240mm | 150mm | 25mm | 9mm | R1 – completed. |
| 2. 4120mm | 90mm | 30mm | 9mm | R1 – completed. |
| 3. 4200mm | 80mm | 35mm | 9mm | R1 – completed. |
| 4. 440mm | 90mm | 20mm | 9mm | R1 – in progress. |
| 5. 290mm | 170mm | 25mm | 9mm | R1 – excavated. |
| 6. 680mm | 90mm | 23mm | 9mm | R1 – excavated. |
| 7. 920mm | 100mm | 27mm | 9mm | R1 – excavated. |
| 8. 560mm | 100mm | 25mm | 8mm | R1 – excavated. |

FW Spencer:

At OBG location Panel Point PP11.5 and PP12.5 of bike path, this QA randomly observed FW Spencer qualified welder Damian Llanos perform Complete Joint Penetration (CJP) 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on the 1" and 2" weldolet for the 2 ½" and 4" diameter utility water and compressed air line respectively. The welder was noted welding the root pass with 3/32" diameter E6010 electrode and followed by fill pass to cover pass using 3/32" diameter E7018H4R electrode implementing Caltrans approved procedure FW Spencer WPS 1-12-1. The welder was noted preheating and removing the moisture of the joint using a portable propane gas torch prior welding. During welding, ABF QC Steve Jensen was noted monitoring the parameters of the welder. At the end of the FW Spencer shift, CJP welding on two (2) 1" and 2" diameter weldolet field weld joints on 2 ½" and 4" diameter utility water and compressed air lines were still continuing and should remain tomorrow.

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Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer